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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/904,593

07/16/2001

Pankaj Vyas

CSCO-008/4339

2619

26392

7590

10/31/2005

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EXAMINER

MOORE JR, MICHAEL J

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/904,593

Applicant(s)

VYAS, PANKAJ

Examiner

Michael J. Moore, Jr.

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 12-15, 24-26, 36-38 and 48-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 16, 17, 27, 28, 39 and 40 is/are rejected.
- 7) ☒ Claim(s) 3-11, 18-23, 29-35 and 41-47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims **12-15, 24-26, 36-38, and 48-51**, drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Specification

Applicant's amendment made to obviate the objection made to the specification in the previous Office Action is proper and has been entered. This objection has been withdrawn.

Claim Objections

Applicant's amendments made to obviate the objections made to the claims in the previous Office Action are proper and have been entered. These objections have been withdrawn.

Claim Rejections - 35 USC § 112

Applicant's amendments made to obviate the rejections made to the claims under 35 U.S.C. § 112 2nd paragraph in the previous Office Action are proper and have been entered. These rejections have been withdrawn.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claim **27** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim **27** recites the limitation "said ATM backbone" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims **1, 2, 16, 17, 27, and 28** are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. (U.S. 6,775,268) ("Wang"). Wang teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **1**, "a method of providing differentiated services for IP packets transported on an asynchronous transfer mode (ATM) backbone" is anticipated by the method shown in Figure 7 and spoken of on column 12, line 62 – column 13, line 67.

"Provisioning a first switched virtual circuit (SVC) and a second SVC on the ATM backbone, each of the first SVC and the second SVC being provisioned as a unicast point-to-point virtual circuit terminating between same end devices" is anticipated by the fast latency path (first SVC) using fast interface TC-F 80 and the interleaved latency

path (second SVC) using interleaved interface TC-I 82 of Figure 6 that establish a connection between service module 20 and access node 28 of Figure 2 as spoken of on column 13, lines 50-61.

"Receiving an IP packet" is anticipated by step 86 of Figure 7 where multiple outgoing data packets are received from customer premise equipment over an IP link as shown in Figure 6.

"Determining whether to send the IP packet on the first SVC or the second SVC according to services desired to be provided for the IP packet" is anticipated by the latency mapping determination by service category interface 78 of Figure 6 based upon a service category request in the ToS field of the packet as spoken of on column 13, lines 50-61.

Lastly, "sending the IP packet on the determined one of the first SVC or the second SVC" is anticipated by step 94 of Figure 7 where outgoing data cells are created for transport over an ATM transport network.

Regarding claim **2**, "examining a header of the IP packet and wherein the services desired for the IP packet being based on the header" is anticipated by the latency mapping determination by service category interface 78 of Figure 6 based upon a service category request in the ToS field (header field) of the packet as spoken of on column 13, lines 50-61.

Regarding claim **16**, "a router for providing differentiated services for IP packets transported on an asynchronous transfer mode (ATM) backbone" is anticipated by

service module 74 (router) of Figure 6 that performs the method shown in Figure 7 spoken of on column 12, line 62 – column 13, line 67.

“Means for provisioning a first switched virtual circuit (SVC) and a second SVC on the ATM backbone, each of the first SVC and the second SVC being provisioned as a unicast point-to-point virtual circuit terminating between same end devices” is anticipated by service module 74 (means) of Figure 6 that provisions a fast latency path (first SVC) using fast interface TC-F 80 and an interleaved latency path (second SVC) using interleaved interface TC-I 82 of Figure 6 that establish a connection between service module 20 and access node 28 of Figure 2 as spoken of on column 13, lines 50-61.

“Means for receiving an IP packet” is anticipated by step 86 of Figure 7 where multiple outgoing data packets are received by service module 74 (means) from customer premise equipment over an IP link as shown in Figure 6.

“Means for determining whether to send the IP packet on the first SVC or the second SVC according to services desired to be provided for the IP packet” is anticipated by the latency mapping determination by service category interface 78 (means) of Figure 6 based upon a service category request in the ToS field of the packet as spoken of on column 13, lines 50-61.

Lastly, “means for sending the IP packet on the determined one of the first SVC or the second SVC” is anticipated by step 94 of Figure 7 where outgoing data cells are created by service module 74 (means) of Figure 6 for transport over an ATM transport network.

Regarding claim **17**, “wherein the means for determining examines a header of the IP packet to determine whether to send the IP packet on the first SVC or the second SVC and wherein the services desired for the IP packet being based on the header” is anticipated by the latency mapping determination by service category interface 78 (means) of Figure 6 based upon a service category request in the ToS field (header field) of the packet as spoken of on column 13, lines 50-61.

Regarding claim **27**, “a computer readable medium carrying one or more sequences of instructions for causing a router to provide differentiated service to IP packets” is anticipated by is anticipated by service module 74 (router) of Figure 6 that performs the method shown in Figure 7 spoken of on column 12, line 62 – column 13, line 67.

“Provisioning a first switched virtual circuit (SVC) and a second SVC on the ATM backbone, each of the first SVC and the second SVC being provisioned as a unicast point-to-point virtual circuit terminating between same end devices” is anticipated by the fast latency path (first SVC) using fast interface TC-F 80 and the interleaved latency path (second SVC) using interleaved interface TC-I 82 of Figure 6 that establish a connection between service module 20 and access node 28 of Figure 2 as spoken of on column 13, lines 50-61.

“Receiving an IP packet” is anticipated by step 86 of Figure 7 where multiple outgoing data packets are received from customer premise equipment over an IP link as shown in Figure 6.

“Determining whether to send the IP packet on the first SVC or the second SVC according to services desired to be provided for the IP packet” is anticipated by the latency mapping determination by service category interface 78 of Figure 6 based upon a service category request in the ToS field of the packet as spoken of on column 13, lines 50-61.

Lastly, “sending the IP packet on the determined one of the first SVC or the second SVC” is anticipated by step 94 of Figure 7 where outgoing data cells are created for transport over an ATM transport network.

Regarding claim **28**, “examining a header of the IP packet and wherein the services desired for the IP packet being based on the header” is anticipated by the latency mapping determination by service category interface 78 of Figure 6 based upon a service category request in the ToS field (header field) of the packet as spoken of on column 13, lines 50-61.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims **39 and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. 6,775,268) (“Wang”) in view of Katsube et al. (U.S. 6,144,661) (“Katsube”).

Regarding claim **39**, Wang teaches where multiple outgoing data packets are received from customer premise equipment over an IP link (inbound interface) as shown in Figure 6.

Wang also teaches service module 74 of Figure 6 that provisions a fast latency path (first SVC) using fast interface TC-F 80 and an interleaved latency path (second SVC) using interleaved interface TC-I 82 of Figure 6 that establish a connection between service module 20 (end device) and access node 28 (end device) of Figure 2 as spoken of on column 13, lines 50-61.

Wang also teaches the latency mapping determination by service category interface 78 (encapsulator) of Figure 6 based upon a service category request in the ToS field of the packet as spoken of on column 13, lines 50-61.

Wang also teaches step 94 of Figure 7 where outgoing data cells are created for transport over an ATM transport network.

Wang does not explicitly teach a memory storing an SVC table that indicates provisioned SVCs.

However, Katsube teaches a connection control unit (memory) in Figure 1 that contains resource management table 16 shown in Figures 1 and 3d that indicates the provisioning of multiple virtual circuits.

At the time of the invention, it would have been obvious to someone skilled in the art to combine the VC table teachings of Katsube with the teachings of Wang in order to keep an updated record of existing virtual circuits at any given time.

Regarding claim **40**, Wang further teaches the latency mapping determination by service category interface 78 (encapsulator) of Figure 6 based upon a service category request in the ToS field (header field) of the packet as spoken of on column 13, lines 50-61.

Allowable Subject Matter

9. Claims **3-11, 18-23, 29-35, and 41-47** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim **3**, Wang teaches the method of claim **2**. Wang fails to teach the maintaining of a table indicating a specific one of the first SVC and the second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in the header, and where the IP packet is sent on either the first SVC or second SVC based on the data stored in this table.

Regarding claims **4-11**, these claims are further limiting to claim **3** and are thus also allowable over the prior art of record.

Regarding claim **18**, Wang teaches the router of claim **17**. Wang fails to teach where the means for determining maintains a table indicating a specific one of the first SVC and the second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in the header, and where the IP packet is sent on either the first SVC or second SVC based on the data stored in this table.

Regarding claims **19-23**, these claims are further limiting to claim **18** and are thus also allowable over the prior art of record.

Regarding claim **29**, Wang teaches the computer readable medium of claim **28**. Wang fails to teach the maintaining of a table indicating a specific one of the first SVC and the second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in the header, and where the IP packet is sent on either the first SVC or second SVC based on the data stored in this table.

Regarding claims **30-35**, these claims are further limiting to claim **29** and are thus also allowable over the prior art of record.

Regarding claim **41**, Wang in view of Katsube teaches the router of claim **40**. Wang in view of Katsube fails to teach where the SVC table indicates a specific one of the first SVC and the second SVC on which to send IP packets having a specific precedence value in a type of service (TOS) field in the header, and where the IP packet is sent according to the data stored in this table.

Regarding claims **42-47**, these claims are further limiting to claim **41** and are thus also allowable over the prior art of record.

Response to Arguments

11. Applicant's arguments with respect to amended claims **1, 2, 16, 17, 27, 28, 39, and 40** have been considered but are moot in view of the new ground(s) of rejection provided above.

12. Applicant's arguments with respect to amended claims **3-11, 18-23, 29-35, and 41-47** have been fully considered and are persuasive. The rejections of these claims have been withdrawn.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ohba et al. (U.S. 6,501,760) and Tanaka (U.S. 2001/0032265) are other references pertinent to this application.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571)

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272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

mjm MM

A handwritten signature in black ink, appearing to be 'Dang Ton', with a stylized 'D' and 'T'.

DANG TON
PRIMARY EXAMINER